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| **Stage 1: Desired Results** | | | | | | |
| Math Common Core  5.OA.1  5.OA.2  5.NBT.2  5.NBT.5  5.NBT.6 | **Transfer Goal** | | | | | |
| *Students will be able to independently use their learning to…*  Manipulate numbers and assess the reasonableness of their answers in real world problems. | | | | | |
| **Meaning** | | | | | |
| **UNDERSTANDINGS**  *Students will understand that…*   * The placement of mathematical symbols determines how an expression should be evaluated * Our number system is based on a well-defined structure using units of ten (from decimals to whole numbers) * There are multiple processes for finding a product or a quotient * Solutions should be analyzed for reasonableness | | | **ESSENTIAL QUESTIONS:**  How is our number system and its symbols relevant to your everyday life?  Topical Questions:   * What’s the best strategy to aid in mastering a multiplication or division problem? * Why is it important to follow the order of operations? * Why do mathematicians and scientists represent numbers using multiples of 10? | | |
| **Acquisition** | | | | | |
| Students will know…   * where parenthesis, brackets, and braces fit into the order of operations. * patterns occur while multiplying and dividing by 10 * there are several strategies and process available to solve multi-digit multiplication and division problems. | | | Students will be skilled at…   * evaluating expressions that include parentheses, brackets, and braces. * explain the logic of behind the base 10 number system. * computing multi-digit multiplication and division problems with fluency and accuracy. | | |
| **Stage 2: Evidence** | | | | | | |
| Evaluative Criteria | Assessment Evidence: | | | | | |
|  | Performance Task(s):   * Target Number Dash Game (Day 5) * Formal group presentation, Start of Year Celebration * Independently create “Math in the Real World” Trifold | | | | | |
|  | Other Evidence:   * Oral or Written response to the Essential Question * Problem of the Day * Math Journal * Class and Homework assignments * Informal Class Discussions * Quizzes * CFAs * Pre-Test & Post-Test * [CCSS Checklist](CCSS.Standard.Checklist.pdf) | | | | | |
| **Stage 3: Learning Plan** | | | | | | |
| *Summary of Key Learning Events and Instruction*   1. Order of Operations   Optional Resources:   * BrainPop Order of Operations * O3 Hopscotch * Target Number Dash Game * O3 Bingo * O3 Showdown  1. Expressions 2. Multiplication & Division 3. Powers of Ten – Place Value | | | | | | |
| Sample Daily Plans: | | | | | | |
| **Day 1**  Complete Pretest…  Introduce the essential question, turn and talk about the question and its vocabulary.  *How is our number system and its symbols relevant to every day life?* | | **Day 2**  Section 1: Order of Operations  [Problem of the Day](POD-Day2.docx) (Discussion)  Review PEMDAS  [BrainPop – Order of Operations](http://www.brainpop.com/math/numbersandoperations/orderofoperations/) | **Day 3**  Section 1: Order of Operations  Problem of the Day  (Discussion)  Inquiry: Using the problem,  [{(3+2) x (6-4)} +2] x 4  Have groups of students explain their solution and defend their strategy. Allow them to use their prior knowledge of parentheses to decide the function of these new symbols.  Introduce the terms brackets and braces and their functions  Sequencing Symbols | | **Day 4**  Section 1: Order of Operations  Problem of the Day  (Discussion)  Extra Practice with Brackets and Braces:  [O3 Bingo](O3-Bingo.pdf)  HOT: [Numerical Expressions Clock](Numerical.Wall.Clock.pdf) | **Day 5**  Section 1: Order of Operations  Problem of the Day  (Discussion)  Performance Task:  [Target Number Dash Game](Target.Number.Dash.pdf)  \*Informal Observations- Observe students’ abilities to manipulate numbers and symbols in order to create target number.  Optional Quiz |
| **Day 6**  Introduce [“Math in the Real World”](Math.in.the.Real.World.docx) tri-fold. | | **Day 7**  Section 2:  Multiplication & Division  Problem of the Day  (Discussion) | **Day 8**  Section 2:  Multiplication & Division  Problem of the Day  (Discussion) | | **Day 9**  Section 2:  Multiplication & Division  Problem of the Day  (Discussion) | **Day 10**  Section 2:  Multiplication & Division  Problem of the Day  (Discussion) |
| Day 11 | | Day 12 | Day 13 | | Day 14 | Day 15 |
| Day 16 | | Day 17 | Day 18 | | Day 19 | Day 19 |
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